Kittipong Chaisiri 2010: Gastrointestinal Helminths of Murid Rodents in Border Provinces of Northern and Northeastern Thailand. Master of Science (Zoology), Major Field: Zoology, Department of Zoology. Thesis Advisor: Associate Professor Win Chaeychomsri, Ph.D. 179 pages.

The presence of gastrointestinal helminth (GI helminth) was investigated in 725 murid rodents, trapped in various habitats of Nan, Loei and Buriram province, in Thailand. The study revealed 17 species of rodents infected with 22 species or taxonomic groups of parasites (3 trematodes, 3 cestodes, 14 nematodes, 1 acanthocephalan and 1 pentastomid). Overall prevalence of infection was 57.7% (418 infected out of 725 rodents).

Among GI helminths, the dominant parasite was Trichostrongylidae (24.3%), followed by *Raillietina* sp. (17.1%), *Hymenolepis diminuta* (8.6%) and *Syphacia muris* (8.6%). The highest GI helminthic infection was found in *Mus caroli* (81.81%), followed by *Mus cervicolor* (76.5%), *Leopoldamys edwardsi* (75.0%), *Bandicota indica* (71.5%) and *Bandicota savilei* (71.4%). The highest total parasite species richness (totalPSR) was found in *Bandicota indica* with 14 parasite species, followed by *Rattus losea* (12), *Rattus tanezumi* (11), *Mus cervicolor* (10), and *Bandicota savilei* (9).

Statistical analysis of individual parasite species richness (individualPSR) with sex, maturity, locality and habitats showed that high individualPSR was possibly related to maturity (adult rodents) and also associated with living in wilder places. In contrast, individualPSR was not associated with host sex. The following parasites, *Raillietina* sp., *Rodentolepis nana* (syn. *Hymenolepis nana*), *Hymenolepis diminuta* and *Moniliformis moniliformis* were considered as cause of parasitic zoonoses of medical important linked with murid rodents.

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